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| 10/510,424 | 04/04/2005 | Dominique Sebillé | 17170/002001 | 8851 |

22511 7590 01/23/2007
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| EXAMINER |
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TIBBITS, PIA FLORENCE

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| ART UNIT | PAPER NUMBER |
|----------|--------------|

2838

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 01/23/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/510,424

Applicant(s)

SEBILLE, DOMINIQUE

Examiner

Pia F. Tibbits

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 September 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 10/6/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

This Office action is in answer to the amendment filed 10/25/2006. Claims 1-10 are pending, of which claims 1-7 are amended, and claims 8-10 are added.

Drawings

1. The drawings are objected to because empty diagram boxes are impermissible under 37 CFR

§1.83(a) which recites as follows:

*"The drawing in a nonprovisional application must show every feature of the invention specified in the claims. However, conventional features disclosed in the description and claims, where their detailed illustration is not essential for a proper understanding of the invention, should be illustrated in the drawing in the form of a graphical drawing symbol or a **labeled** representation (e.g., a **labeled** rectangular box)." (Emphasis added by Examiner)*

The empty diagram boxes 1, 9, 20, found in the Figures of the drawings, must be labeled with an appropriate descriptive phrase. Appropriate correction is required. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to this Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to because element 20, in amended fig.3A, is shown non-connected.

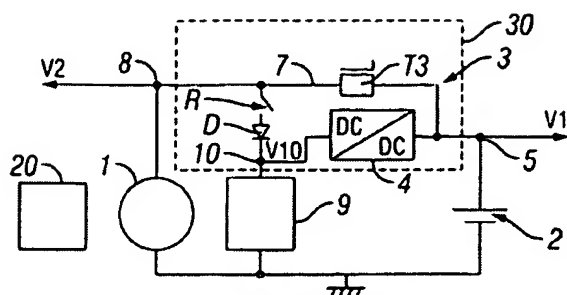


FIG. 3A

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claim 2 is objected to because of the following informalities: "MOSFET transistor" should be corrected to read ---MOSFET--- as MOSFET is the abbreviation for metal-oxide-semiconductor field-effect transistor. Appropriate correction is required.

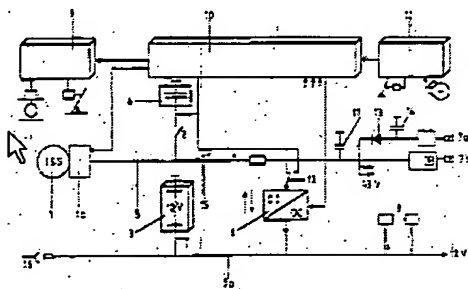
Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over disclosed prior art, **DE-10213105** in view of **Gale et al.** [6420793].

As to claim 1, DE-10213105 discloses in figures 1-10 and in the abstract an arrangement for carrying out a method for controlling a multi-phased and reversible rotating electrical machine, associated with a heat engine of a vehicle, including a network for supplying electrical energy and a battery serving as a source of electrical energy connected to this network, as well as a command and control unit for the said electrical machine, in which overexcitation of the machine causes the production of energy, and makes this energy available for the execution of certain functions associated with the vehicle, comprising:



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BASIC-ABSTRACT:

NOVELTY - The drive for a motor vehicle has an internal combustion engine with an integral starter-generator (1) and a high tension supply wiring (5). There is an energy storage ultra capacitor (4) and a battery (3). A switching circuit (1a,2,12,15) has a control (10) which operates on the driving condition of the vehicle and the energy storage voltage, to control current flow or from the starter-generator.

USE - For energy recuperation in a motor vehicle drive

ADVANTAGE - Allows reduced consumption of stored energy

DESCRIPTION OF DRAWING(S) - Drawing shows diagram of vehicle drive

Starter-generator 1

Switching circuit 1a,2,12,15

Battery 3

Ultra capacitor 4

Supply wiring 5

Control 10

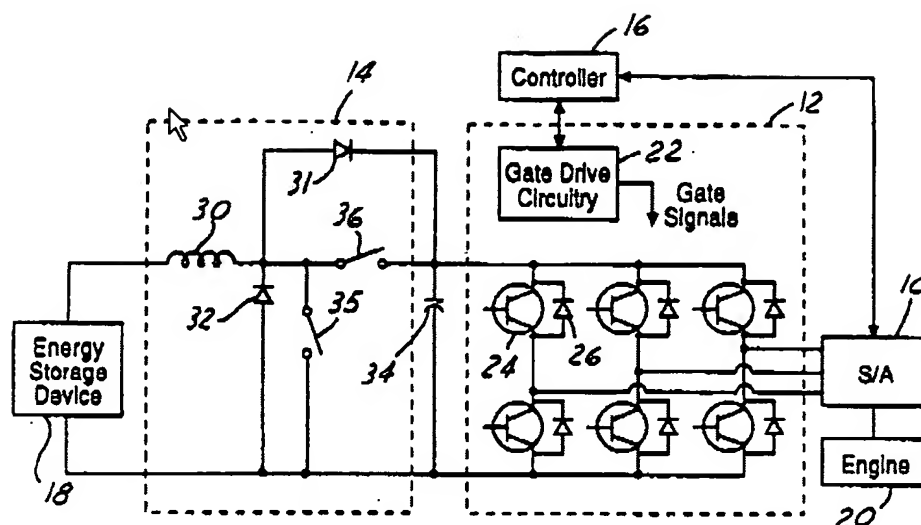
a device 4 for supplying the energy produced during overexcitation of the machine 1; wherein the device for supplying the energy is an energy storage device 4 that can be connected to the rotating electrical machine 1 by means of a switching device 2 during overexcitation of the machine 1,

a DC/DC device 6 mounted between the energy supply battery 3 and the energy storage device 2 via a switching device 1 in that it includes a circuit [see figures] that can directly connect the rotating electrical machine 1 to the battery 3 and in that switch 1a is provided in the above-mentioned circuit.

DE-10213105 does not disclose the predetermined period of time.

Gale discloses in a "*Power delivery circuit with boost for energetic starting in a pulsed charge starter/alternator system*" the use of a controller 16 [see column 3, lines 30-40]:

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5) Controller 16 is preferably a digital signal processor (DSP). A controller 16 can be a dedicated controller to operate the converter 12 or alternatively, as shown in FIG. 1, it can provide multiple functions by controlling the converter 14 and/or the starter/alternator 10 as well. The controller 16 may also be part of the engine controller (not shown). In such cases, the controller 16 would include a central processing unit such as a microprocessor, inputs and outputs, and associated memory such as random access memory and read-only memory.

With regard to the limitation "predetermined period of time": it is an inherent function of the controller, which includes a CPU, to continuously monitor and time the functions of the starter/alternator, and MPEP 2100 states that the disclosure of a limitation may be expressed, implicit or **inherent**.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify DE-10213105's apparatus and provide a controller, which includes a CPU, as disclosed by Gale, in order to be able to control the functions of the converter, as well as the functions of the starter/alternator.

As to claim 8, see remarks and references above.

6. Claims 2-5, 9, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over disclosed prior art, **DE-10213105** and **Gale**, in view of **Nomura et al.** [5446365].

[illegible]

(7) A bipolar transistor, MOSFET, IGBT, or Static Inductor thyristor can be used as the switch elements 22 and 23.

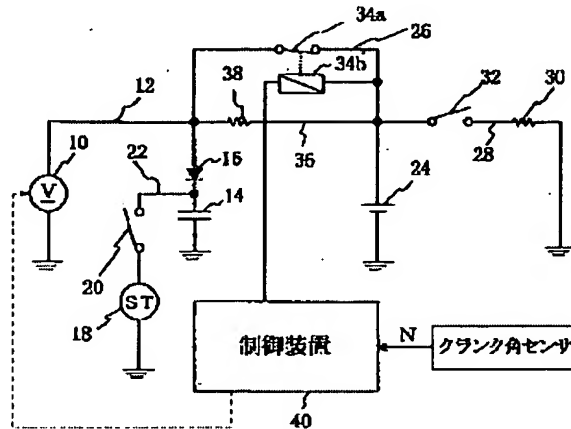
As to claims 3-5, 9, 10, see remarks and references above.

7. Claims 6, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over disclosed prior art, **DE-10213105** and **Gale**, in view of **JP-10184506**.

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As to claim 6, DE-10213105 and Gale do not disclose wherein the switching device comprises a diode with a switch mounted in series with the diode.

JP-10184506 discloses in figures 1-5 and in the abstract a diode 16 in series with switch 20 connecting a capacitor 14 with an alternator 18.



Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify (DE-10213105 and Gale)'s apparatus and provide a diode in series with a switch, as disclosed by JP-10184506, in order to prevent backflow.

As to claim 7, DE-10213105, Gale and JP-10184506 do not disclose the use of an electromagnetic relay.

The instant specification only mentions the limitation "an electromagnetic relay" at paragraph [0076]:

[0076] Now, with reference to FIG. 3, a second embodiment of the invention will be described. In this embodiment, the switching device [6] no longer consists of the two MOSFET transistors [T1] and [T2], but rather of a diode [D] with which a switch [R], which may be an electromagnetic relay, is mounted in series. The presence

"If the applicant has *not* demonstrated the criticality of a specific limitation, it would be appropriate to rely solely on case law as the rationale to support an obviousness rejection". See ***MPEP 2144.04***.

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Therefore, the use of an electromagnetic relay, absent any criticality, is only considered to be the use of "optimum" or "preferred" material that a person having ordinary skill in the art at the time the invention was made using routine experimentation would have found obvious to provide for the switch disclosed by DE-10213105, Gale and JP-10184506 in order to improve the speed of response to commands since it has been held to be a matter of obvious design choice and within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use of the invention. See *In re Leshin*, 125 USPQ 416. *In re Aller*, 105 USPQ 233 (CCPA 1955), *In re Boesch*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980).

Information Disclosure Statement

8. The information disclosure statement filed 10/6/2004 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language, i.e. DE-10213105, and DE-4007526. Since these references seem to be relevant to applicant's instant application, a full translation should be provided.

Response to Arguments

9. Applicant's arguments with respect to the claims have been considered but are moot in view of the new grounds of rejection, and in view of Applicant's revision of independent claim 1, which is new issue.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory

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action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in PTO-892 and not mentioned above disclose related apparatus.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Pia Tibbits whose telephone number is 571-272-2086. If unavailable, contact the Supervisory Patent Examiner Karl Easthom whose telephone number is 571-272-1989. The Technology Center Fax number is 571-273-8300.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PFT

January 16, 2007

Pia Tibbits

Primary Patent Examiner

